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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/760,167	KUBLER ET AL.	
	Examiner	Art Unit	
	IAN N. MOORE	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-104* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-104* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/30/08;7/18/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 22-57 and 93-100 are objected to because of the following informalities:

Claim 22 recites the clause with the optional language "**adapted for**" in lines 3, 4 and 8. In order to present the claim in a better form and to describe a positive or require steps/function to be performing (i.e. using the claim language that does not suggest or make optionally but required steps to be performed), applicant is suggested to revise the claim language such that the steps/functions, which follows "**adapted for**", to be performed are required (not optional).

Claim 39 recites the clause with the optional language "**adapted for**" in line 3 and "**adapted to**" in line 7. In order to present the claim in a better form and to describe a positive or require steps/function to be performing (i.e. using the claim language that does not suggest or make optionally but required steps to be performed), applicant is suggested to revise the claim language such that the steps/functions, which follows "**adapted for**" and "**adapted to**", to be performed are required (not optional).

Claims 23-38, 40-57, 93-96, and 97-100 are also objected since they are depended upon objected claims 22 and 39 as set forth above.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 22,24,25,28-30,33-39,41,42,45-47,50-58,61,63-66,69-73,76, 82-86 and 89-104 rejected under 35 U.S.C. 103(a) as being unpatentable over Berken (WO 91/08629) in view of Richter (US006104706A) and Mahany (U.S. 4,910,794).

Regarding Claims 22, 58, and 63, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has a transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1C, phone interface 209 converts sound/voice input from telephone 127 into digital voice packets) for transmission via the wireless transceiver (see page 6, line 16-20; for transmission via radio antenna), and for receiving digital voice packets via the wireless transceiver (see FIG. 1C, for receiving voice packet from RF channel 107 via radio port), the contents of the digital voice packet for conversion into sound (see FIG. 1C, phone interface 209 converts digitized voice packets into analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the

received data into data packets) for transmission via the wireless transceiver (see FIG. 1C, for transmitting via radio antenna; see page 8, line 8-16), and for receiving data packets via the wireless transceiver (see FIG. 1C, for receiving data packet from RF channel 107 via radio port), the contents of the data packets used for reproducing digital data (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets; see page 7, line 25 to page 8, line 7); and

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the information received from its network interface (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its fiber interface 205 by switching/transferring to radio interface for transmission; page 5, line 1-27; page 7, line 19-24), and

selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its radio interface 115 by switching/transferring to fiber interface 205; see page 4, line 16-24; see page 6, line 21-26); and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information for routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN);

wherein the portable terminal device wirelessly received a message from the at least one access device (see FIG. 1A, 3, wireless user node (i.e. a combined system of terminal/LAN port 221/223 and control processor 215; see page 4, line 16-25; see page 9, line 1-26) receive control message from the access node (i.e. a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149)) and send to the at least one access device (see FIG. 1A, 3, and transmit the control message to the access node; see page 4, line 16-25; see page 9, line 1-26);

wherein the at least one access device transmits digital voice packets and digital data packets to the portable terminal device (see page 5, line 17-27; see page 6, line 21-26; the access node transmits voice packets and data packets to the wireless user node; see page 7, line 19-24; see page 8, line 17-22).

Berken does not explicitly disclose "destination".

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by Richter and well established teaching in art in the system of Berken, so that it would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet.

Although the combined system of Berken and Richter discloses the portable terminal device wirelessly communication with the at least one access device as set froth above,

neither Berken nor Richter explicitly discloses "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate".

However, rate control based on evaluation/measurement in the wireless communication network is well known in the art. In particular, Mahany discloses the portable terminal device (see FIG. 4, mobile terminal unit 80) evaluates a message wirelessly received (see FIG. 4, evaluates a poll or test message; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-

8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69) from the at least one access device (see FIG. 4, from base station 70) and sends to the at least one access device an indication of a data rate on the evaluation (see FIG. 4, transmits to the base station 70 a response data rate message based on the evaluation; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-2 to 17-5; see col. 21, line 56 to col. 22, line 39) and

wherein the at least one access device selects a data rate for transmitting data/packets to the portable terminal device, based upon the indication of a data rate (see FIG. 7A-B, 8A-B, the base station 70 selects and switches a high/low data rate for transmitting data/packets to mobile terminal unit 80 based on evaluated response message which indicates high data rate or low data rate; col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-6, 17-8, 17-9, 17-10, 17-12, 17-14, 17-14, 17-18, 17-20; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claim 39, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has wireless transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital representation of sound (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed voice packets (i.e. of telephone/sound signals); see page 6, line 16-20; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital data (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed data packets (i.e. data signals); see page 7, line 25 to page 8, line 7;

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges

data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device adapting one or both of packets comprising digital representation of sound and packets comprising digital data from its wireless transceiver for transmission via designated one of the at least one network interface (see FIG. 1A,B, a node 101 transmits the voice and/or data packet received from a radio transceiver 115 to a designated/assigned/picked network interface fiber 205 (to PSTN, Ethernet, or Token Ring networks); see page 4, line 16-24; see page 6, line 21-26; and

for adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see FIG. 1A, B, a node 101 transmits the voice and/or data packet received from a designated/assigned/picked network interface 205 via a radio transceiver 115 (to user module); page 5, line 1-27; page 7, line 19-24; and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN);

wherein the portable terminal device wirelessly received a message from the at least one access device (see FIG. 1A, 3, wireless user node (i.e. a combined system of terminal/LAN port 221/223 and control processor 215; see page 4, line 16-25; see page 9, line 1-26) receive control message from the access node (i.e. a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149)) and send to the at least one access device (see FIG. 1A, 3, and transmit the control message to the access node; see page 4, line 16-25; see page 9, line 1-26);

wherein the at least one access device transmits digital voice packets and digital data packets to the portable terminal device (see page 5, line 17-27; see page 6, line 21-26; the access node transmits voice packets and data packets to the wireless user node; see page 7, line 19-24; see page 8, line 17-22).

Berken does not explicitly disclose "destination".

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by Berken and well established teaching in art in the system of Berken, so that it would provide capability to the caller and callee to hear each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet.

Although the combined system of Berken and Richter discloses the portable terminal device wirelessly communication with the at least one access device as set froth above,

neither Berken nor Richter explicitly discloses "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate".

However, rate control based on evaluation/measurement in the wireless communication network is well known in the art. In particular, Mahany discloses the portable terminal device (see FIG. 4, mobile terminal unit 80) evaluates a message wirelessly received (see FIG. 4, evaluates a poll or test message; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69) from the at least one access device (see FIG. 4, from base station 70) and sends to the at least one access device an indication of a data rate on the evaluation (see FIG. 4, transmits to the base station 70 a response data rate message based on the evaluation; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-2 to 17-5; see col. 21, line 56 to col. 22, line 39) and

wherein the at least one access device selects a data rate for transmitting data/packets to the portable terminal device, based upon the indication of a data rate (see FIG. 7A-B, 8A-B, the base station 70 selects and switches a high/low data rate for transmitting data/packets to mobile terminal unit 80 based on evaluated response message which indicates high data rate or low data rate; col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-6, 17-8, 17-9, 17-10, 17-12, 17-14, 17-14, 17-18, 17-20; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claim 73, Berken discloses one or more circuits for use in a communication device supporting the exchange of voice and data (see FIG. 1A, C, circuits/modules/components of wireless user device for voice and data communication; see page 4, line 6-9), the one or more circuits comprising:

at least one interface to circuitry for wirelessly exchanging (see FIG. 1A, C, Radio interface 211 circuitry/module) one or both of digitized voice packets (see FIG. 1C, transmitting digital voice packets; see page 6, line 16-20) and data packets (see FIG. 1C, transmitting data packets; see page 8, line 8-16) with at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) of a communication network (see FIG. 1A, wireless telecommunication system; see page 4, line 10-25; see page 5, line 1-17) using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure); and

at least one processor (see FIG. 1C, a combined system of processor 215, switch 213, phone 209, terminal 221, LAN 223) operably coupled to the at least one interface (see FIG. 1C, couples to radio interface 211; see page 6, line 14-20; page 7, line 25-32), the at least one processor operating to:

receive, for wireless transmission as digital voice packets, first digital voice data converted from a first electrical signal representative of sound (see FIG. 1C, phone interface 209 converts the received first electrical signal of a sound/voice input from telephone 127 into digital voice packets for radio transmission; see page 6, line 16-20), and transmit, for conversion to a second electrical signal representative of sound, second digital voice data wirelessly receive in digital voice packets (see FIG. 1C, phone interface 209 converts back digitized voice packets received from radio interface and transmits back into second electrical signal representative of analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5),

capture digital data into data packets for wireless transmission (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets for wireless transmission), and to reproduce digital data from wirelessly received data packets (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets via radio interface; see page 7, line 25 to page 8, line 7), and

wirelessly receiving a message from the at least one access device (see FIG. 1A, 3, wireless user node (i.e. a combined system of terminal/LAN port 221/223 and control processor 215; see page 4, line 16-25; see page 9, line 1-26) receive control message from the access node (i.e. a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149))

sending to the at least one access device (see FIG. 1A, 3, transmit the control message to the access node; see page 4, line 16-25; see page 9, line 1-26);

receive digital voice packets from the at least one access device by the at least one access device (see page 5, line 17-27; see page 6, line 21-26; receiving voice packets from the access node by the wireless user node; see page 7, line 19-24; see page 8, line 17-22);

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN).

Berken does not explicitly disclose "destination".

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Richter teaches wherein digital voice packets comprise destination information used for routing (see FIG. 6, destination address 76, max destination count 74, active destination count 72, and destination count that used for routing; see col. 6, line 60 to col. 7, line 20) the digital voice packets through the communication network (see FIG. 5, for routing voice packets over the network between two callers; see col. 5, line 36-66; col. 6, line 44-56).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide destination, as taught by Berken and well established teaching in art in the system of Berken, so that it would provide capability to the caller and callee to hear

each other; see Richter col. 7, line 10-19, and it would also identify and locate the recipient of the voice data packet.

Although the combined system of Berken and Richter discloses the portable terminal device wirelessly communication with the at least one access device as set froth above,

neither Berken nor Richter explicitly discloses "evaluates a message wirelessly received from the at least one access device, sends an indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate".

However, rate control based on evaluation/measurement in the wireless communication network is well known in the art. In particular, Mahany discloses the portable terminal device (see FIG. 4, mobile terminal unit 80) evaluates a message wirelessly received (see FIG. 4, evaluates a poll or test message; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69) from the at least one access device (see FIG. 4, from base station 70)

send to the at least one access device an indication of a data rate on the evaluation (see FIG. 4, transmits to the base station 70 a response data rate message based on the evaluation; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-2 to 17-5; see col. 21, line 56 to col. 22, line 39) and

receive digital voice packets from the at least one access device at a data rate selected by the at least on access device based upon the indication of a data rate (see FIG. 7A-B, 8A-B, receiving data/packets at mobile terminal unit 80 from base station 70 at high/low data rate selected and switched by the base station 70 based on evaluated response message which

indicates high data rate or low data rate; col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-6, 17-8, 17-9, 17-10, 17-12, 17-14, 17-14, 17-18, 17-20; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claims 24, 41 and 82, Berken disclose a frequency hopping spread spectrum technique (see page 11, line 20-31; frequency hoping system of spread spectrum coding).

Regarding Claims 25, 42 and 83, Berken disclose a direct sequence spread spectrum technique (see page 11, line 20-31; direct sequence spread spectrum coding).

Regarding Claims 28 and 45, Berken discloses the packets exchanged by the at least one portable terminal comprises digital voice packets and data packets (see page 6, line 16-20; see page 5, line 28 to page 6, line; voice packets and data packets are exchanged).

Regarding Claims 29, 46 and 84, Berken discloses wherein digitized voice packets and data packets are transported wirelessly without regard to content (see page 6, line 16-20; see page 8, line 8-16; voice and data packets are transmitted via radio interface regardless whether it is voice or data packets).

Regarding Claims 30 and 47, Berken disclose the wired network comprises a packet network (see FIG. 1A, see page 9, line 1-10; see page 10, line 17-30; Ethernet LAN, or Token Ring LAN).

Regarding Claims 33, 35 and 50, Berken discloses a wired network comprises an Ethernet compliant network line (see FIG. 1A, Ethernet LAN; see page 9, line 1-10; see page 10, line 17-30).

Regarding Claims 34,51, 52 and 64, Berken discloses the wired network is a conventional switched telephone network (see FIG. 1A, PSTN 151; see page 9, line 1-10; see page 10, line 17-30), wherein the network interface communication via using digital information (see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22; transmission digital information over PSTN).

Regarding Claims 36 and 53, Berken discloses the communication network supports the established of voice calls by the at least one portable terminal via the wired network (see FIG. 1A, PSTN, Ethernet or Token Ring networks; see page 9, line 1-10; see page 10, line 17-30).

Regarding Claims 37 and 54, Berken discloses the communication network supports the receipt of voice calls by the at least one portable terminal via the wired network (see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22; the radio network receives voice calls via PSTN, Ethernet or Token Ring network).

Regarding Claims 38 and 55, Berken discloses wherein the communication network supports the concurrent exchange of data unrelated to a voice call (see FIG. 1A; see page 7, line 25 to page 8, line 7; data packets carry actual data, not the management of voice calls which is related to a voice call).

Regarding Claim 56, Berken discloses wherein the designated one of the at least one network interface is designated based upon information received via the wireless transceiver (see FIG. 1B, packet switch 111 of the node 101 designates a fiber port 205 for PSTN or Ethernet based upon received information from radio interface 115; page 5, line 1-27; page 7, line 19-24).

Regarding Claim 57, Berken discloses wherein the designated one of the at least one network interface is designated based upon information received via the network interface (see FIG. 1B, packet switch 111 of the node 101 designates a fiber port 205 for PSTN or Ethernet based upon received information page 5, line 1-27; page 7, line 19-24).

Regarding Claim 61, Berken discloses wherein the at least one access device comprises a network interface circuit that communicates using a packet protocol (see FIG. 1A-B, a network interface of node 101 uses Ethernet LAN 143 or Token Ring LAN 145; see page 4, line 16-25; see page 7, line 7-16).

Regarding Claim 65, Berken discloses wherein the network interface is compatible with a conventional analog loop connection (see FIG. 1A, B, network interface 141 connecting with PSTN 151; thus, it is clear that PSTN utilizes a conventional analog local loop connection; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24).

Regarding Claim 66 and 76, Berken further discloses wherein the contents of each digital voice packet transmitted wirelessly by a communication device of a first party (see FIG. 1A, voice packet transmitted via radio by the voice telephone 127) is received in a digital voice packet by a destination party (see FIG. 1A, D, subscriber line 141/171, receiving a digital voice packet at subscriber line 171 where a subscriber/destination party is connected).

Regarding Claims 69 and 70, Berken discloses the at least one wireless receiver and the at least one wireless transmitter, wherein the at least one wireless receiver and the at least one wireless transmitter comprises a signal transceiver (see FIG. 1A, C, radio 211 interface/port which perform both transmitter and receiver functionalities; see page 6, line 14-20).

Regarding Claims 71 and 72, Berken discloses wherein the wireless communication circuitry comprises at least one transceiver, wherein the at least one transceiver comprises a single transceiver (see FIG. 1A, C, radio 211 interface/port which perform both transmitter and receiver functionalities; see page 6, line 14-20).

Regarding Claim 85, the combined system of Berken and Richter discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a network as set forth in claim 73. Richter further discloses teaches routing one of digital voice data or electrical signals representative of sound (see FIG. 7A, Audio data source 702) over a wired network (see FIG. 5, wired local are network such as ISDN or telephone line); see col. 6, line 9-15; see col. 7, line 24-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide caller a wired network, as taught by Richter in the system of Berken, so that it would provide common availability to callers to establish the connection; see Richter col. 6, line 9-15.

Regarding Claim 86, Richter discloses the routing is based upon input of a user of the communication device (see FIG. 1A, 1D, 7A, routing the call is according to input of a caller of the device; see col. 5, line 36-60; see col. 6, line 32-67; col. 7, line 10-40; see col. 8, line 10-23; caller request/input for specific service (i.e. video, audio or text) for routing. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to

provide routing is based upon input of a user of the communication device, as taught by Richter in the system of Berken, for the same motivation as set forth above in claim 73 and 85.

Regarding Claims 89, 93, 97, 101, neither Berken nor Richter explicitly discloses "the indication of a data rate is a data rate".

However, Mahany discloses the indication of a data rate is a data rate (see FIG. 4, a response data rate message is a high/low data rate; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-2 to 17-5; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "the indication of a data rate is a data rate" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claims 90, 94, 98, 102, neither Berken nor Richter explicitly discloses "evaluated message is received periodically from the at least one access device".

However, Mahany discloses evaluated message is received periodically from the at least one access device (see FIG. 4, evaluates a poll or test message is received periodically at time slot intervals from the base station 70; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluated message is received periodically from the at least

one access device" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claims 91, 95, 99, 103, neither Berken nor Richter explicitly discloses "a polling message".

However, Mahany discloses the message received periodically is a polling message (see FIG. 4, evaluates a poll message is received periodically at time slot intervals from the base station 70; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "a polling message" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claims 92, 96, 100, 104, Berken discloses reception of a message preamble (see FIG. 3, receiving control message in the preamble/beginning of the message/frame; see page 9, line 1-26).

Neither Berken nor Richter explicitly discloses "evaluating".

However, Mahany discloses evaluating a message evaluates reception of a message preamble (see FIG. 13-16; evaluating receive message preamble/beginning of the communication frame/message (e.g. a specific data rate); see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluating" as taught by Mahany, in the combined system of Berken and Richter, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

4. Claims 23,40, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter and Mahany, and further in view of Cripps (US005838730A).

Regarding Claims 23, 40 and 81, neither Berken, Richter nor Mahany explicitly disclose "a frequency of approximately 2.4 gigahertz".

However, using 2.4 GHz frequency hopping is well known in the art as defined by FCC. In particular, Cripps discloses wherein the wireless packet network communicates at a frequency of approximately 2.4 gigahertz (abstract; see col. 2, line 13-20; see col. 36, line 32-45; 2.4 GHz).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 2.4 GHz, as taught by Cripps, in the combined system of Berken, Richter and Mahany, so that it would provide a transmitter/receiver in accordance with FCC rules for 2.4 GHz ISM which is low cost and low power; see Cripps col. 2, line 15-32.

5. Claims 26,27,31-32,43,44, 48-49,59, 60, 62, 74, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter and Mahany, and further in view of Perkins (US005159592A).

Regarding Claims 26,27,43,44, 59, 60, 62, 74, and 75, neither Berken, Richter nor Mahany explicitly discloses a packet Internet Protocol (IP), wherein IP protocol is TCP/IP.

However, Perkins discloses wherein the wireless packet network comprising communication device (see FIG. 2, Mobile Unit MU 10) and the access device (see FIG. 1, a combined system of Header station HS 12 and gateway 16) uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 4, line 10-20; see col. 7, line 35-56; col. 8, line 30-45; mobile unit 10 and access gateway utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP, as taught by Perkins, in the combined system of Berken, Richter and Mahany, so that it would provide wireless network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

Regarding Claims 31-32 and 48-49, neither Berken, Richter nor Mahany explicitly discloses the wired network uses an Internet Protocol (IP), wherein IP protocol is TCP/IP.

However, Perkins discloses wherein the wired network comprises a packet network, uses an Internet Protocol (IP), wherein IP protocol is TCP/IP (see col. 3, line 55-64; col. 4, line 10 to col. 5, line 60; see col. 7, line 5-67; col. 8, line 45-67; Header station couples to a wired packet network utilizing TCP/IP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide TCP/IP in wire network, as taught by Perkins, in the combined system of Berken, Richter and Mahany, so that it would provide wireless migration users to a network operating in accordance with the TCP/IP protocol; see Perkins col. 2, line 55-60; see col. 3, line 15-30.

6. Claim 67 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter and Mahany, and further in view of Callon (US005251205A).

Regarding Claim 67, Berken discloses wherein the communication network comprises a plurality of access devices (see page 10, line 20-30; see page 11, line 15-17,29-31; nodes in the network), and routing of digital voice packets between access devices as set forth above in claim 58.

Neither Berken, Richter nor Mahany explicitly discloses based upon "a cost".

However, using a least cost route/path is well known in the art. In particular, Callon discloses wherein the routing is based upon a cost of use of communication path (see FIG. 5A, 8A, 10A; cost; see col. 13, line 14-24;see col. 21, line 21 to col. 22, line 67; also see FIG. 12-13, col. 18-19).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide routing base upon "cost", as taught by Callon, in the combined system of Berken, Richter and Richter, so that it would help to share network traffic loads between paths; see Callon col. 21, line 50-60.

7. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter and Mahany, and further in view of Reece (US005915214A).

Regarding Claim 68, the combined system of Berken, Richter and Mahany discloses using routing information received by the communication device as described above in claims.

Neither Berken, Richter nor Mahany explicitly discloses "alternate" routing.

However, user selection alternate routing based upon cost of the service provider is well known in the art. In particular, Reece discloses a user is prompted to select a routing alternative using routing information received by the communication unit (see FIG. 6, step

640,650,651,661,660,670; see FIG. 7-10; user is prompted with the provider information/cost to select a routing/switch different/alternative using routing/switching information received at the terminal; see col. 12, line 60 to col. 14, line 67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide user selection of "alternate" routing, as taught by Reece, in the combined system of Berken, Richter and Mahany, so that it would allow user to select a different/alternative, lower cost provider to complete the call; see Reece col. 3, line 19-65.

8. Claims 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter, Mahany and further in view of Lewen (US005341374A).

Regarding Claim 77, the combined system of Berken, Richter and Mahany discloses wherein the at least one processor received digital voice data and conversion of digital voice data as set forth above in claims.

Neither Berken, Richter nor Mahany explicitly discloses queues received data and delays conversion of queued data for an adjustable period of time.

However, Lewen teaches queuing (see FIG. 4, queuing/storing/collecting common memory 80) received digital voice data (see FIG. 2, collect received samples 120; see col. 14, line 44-49) and delays conversion of queued digital voice data for an adjustable period of time (see FIG. 2, delay time for storing/collecting voice samples in the memory before packetizing is adjusted between Tw (walktime) up to Tbfr (buffer storage time)); see col. 15, line 5-9,15-30.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to queue received data and delays conversion of queued data for an

adjustable period of time, as taught by Lewen in the combined system of Berken, Richter and Mahany, so that it would provision a communication system which effectively provides integrated voice, data and video communication and also provide real time reception of voice communication; see Lewen col. 2, line 50-62.

Regarding Claim 78, Lewen further discloses adjusts the period of time based upon a network propagation delay (see col. 13, line 56-66; see col. 14, line 22-39; see col. 15, line 5-9,15-30; adjusting delay time according Tw (propagation delay)).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the period of time based upon a network propagation delay, as taught by Lewen in the combined system of Berken, Richter and Mahany, for the same motivation as set forth above in claim 77.

Regarding Claim 79, Lewen further discloses adjustable period of time using a packet sent to the communication device in response to a packet sent by the communication device (see col. 13, line 56-66; see col. 14, line 22-39; see col. 15, line 5-9, 15-30; adjusting delay time according Tw (propagation delay), which is a time required for a signal bit of a frame/packet to travel from transmitting node to receive node).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide adjustable period of time using a packet sent to the communication device in response to a packet sent by the communication device, as taught by Lewen in the combined system of Berken, Richter and Mahany, for the same motivation as set forth above in claim 77.

9. Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berken, Richter, Mahany, Lewen as applied to claim 79 above, and further in view of McKee (US005477531A).

Regarding Claim 80, neither Berken, Richter, Mahany nor Lewen explicitly disclose a test packet.

However, McKee discloses determining propagation delay or queuing delay by utilizing in response to test packet sent by the communication device (see FIG. 2, test packet; see col. 1, line 60 to col. 2, line 60).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a test packet, as taught by McKee, in the combined system of Berken, Richter, Mahany and Lewen, so that it would provide to determine/test propagation delay or queuing delay; see McKee abstract col. 2, line 20-32.

10. Claims 87-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berken in view of Richter and Mahany, and further in view of Focsaneanu (US005610910A).

Regarding Claim 87, the combined system of Berken, Richter and Mahany discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a network as set forth in claims above.

Neither Berken, Richter nor Mahany explicitly discloses a packet network.

However, Focsaneanu discloses wherein the wired network is a packet network (see FIG. 7, data/packet switching network 214 utilizing protocols TCP/IP, X.25, ATM; see col. 7, line 10-20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet network as taught by Focsaneanu in the combined

system of Berken, Richter and Mahany, so that it would provide an intelligent connection to multiple types of service and no-service specific transport networks in multiple protocol environments; see Focsaneanu col. 4, line 10-56.

Regarding Claim 88, the combined system of Berken, Richter and Mahany discloses wherein at least one processor is further operable to cause routing of one of the digital voice packets over a telephone line and ISDN network as set forth in claims above.

Although it is well known that ISDN network is part of the PSTN network, neither Berken nor Richter explicitly discloses PSTN. However, Focsaneanu discloses wherein the wired network is a public switched telephone network (see FIG. 7, PSTN 212; see col. 7, line 10-17).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PSTN as taught by Focsaneanu in the combined system of Berken, Richter and Mahany, so that it would provide an intelligent connection to multiple types of service and no-service specific transport networks in multiple protocol environments; see Focsaneanu col. 4, line 10-56.

Other Rejections

11. Claims 22, 39, 58, 63 and 73 rejected under 35 U.S.C. 103(a) as being unpatentable over Berken (WO 91/08629) in view of Shachar (U.S. 5,764,736).

Regarding Claims 22, 58, and 63, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has a transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted for converting sound into digital voice packets (see FIG. 1C, phone interface 209 converts sound/voice input from telephone 127 into digital voice packets) for transmission via the wireless transceiver (see page 6, line 16-20; for transmission via radio antenna), and for receiving digital voice packets via the wireless transceiver (see FIG. 1C, for receiving voice packet from RF channel 107 via radio port), the contents of the digital voice packet for conversion into sound (see FIG. 1C, phone interface 209 converts digitized voice packets into analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted for capturing digital data into data packets (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets) for transmission via the wireless transceiver (see FIG. 1C, for transmitting via radio antenna; see page 8, line 8-16), and for receiving data packets via the wireless transceiver (see FIG. 1C, for receiving data packet from RF channel 107 via radio port), the contents of the data packets used for reproducing digital data (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets; see page 7, line 25 to page 8, line 7); and

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device selectively transferring to its wireless transceiver for transmission at least a portion of the information received from its network interface (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its fiber interface 205 by switching/transferring to radio interface for transmission; page 5, line 1-27; page 7, line 19-24), and

selectively transferring to its network interface for transmission at least a portion of the information received by its wireless transceiver (see FIG. 1B, packet switch 111 of the node 101 selects/picks (i.e. selectively) data/information received from its radio interface 115 by switching/transferring to fiber interface 205; see page 4, line 16-24; see page 6, line 21-26); and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4,

packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information for routing/forwarding information through PSTN, Ethernet LAN, or Token Ring LAN);

wherein the portable terminal device wirelessly received a message from the at least one access device (see FIG. 1A, 3, wireless user node (i.e. a combined system of terminal/LAN port 221/223 and control processor 215; see page 4, line 16-25; see page 9, line 1-26) receive control message from the access node (i.e. a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149)) and send to the at least one access device (see FIG. 1A, 3, and transmit the control message to the access node; see page 4, line 16-25; see page 9, line 1-26);

wherein the at least one access device transmits digital voice packets and digital data packets to the portable terminal device (see page 5, line 17-27; see page 6, line 21-26; the access node transmits voice packets and data packets to the wireless user node; see page 7, line 19-24; see page 8, line 17-22).

Berken does not explicitly disclose "destination".

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Shachar teaches wherein digital voice packets (see col. 8, line 32-39; voice packet) comprise destination information used for routing the digital voice packets through the communication network (see col. 12, line 1-20, 50-57; adding a service tag to the voice packet, the service tag

includes the phone number to be call (i.e. destination phone information/number) for routing/transmitting/sending to the network).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "destination", as taught by Berken and well established teaching in art in the system of Berken, so that it would provide simultaneous establishing of voice communication; see Shachar col. 5, line 15-30, col. 6, line 42-55.

Although the combined system of Berken and Shachar discloses the portable terminal device wirelessly communication with the at least one access device as set froth above,

neither Berken nor Shachar explicitly discloses "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate".

However, rate control based on evaluation/measurement in the wireless communication network is well known in the art. In particular, Mahany discloses the portable terminal device (see FIG. 4, mobile terminal unit 80) evaluates a message wirelessly received (see FIG. 4, evaluates a poll or test message; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69) from the at least one access device (see FIG. 4, from base station 70) and sends to the at least one access device an indication of a data rate on the evaluation (see FIG. 4, transmits to the base station 70 a response data rate message based on the evaluation; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-2 to 17-5; see col. 21, line 56 to col. 22, line 39) and

wherein the at least one access device selects a data rate for transmitting data/packets to the portable terminal device, based upon the indication of a data rate (see FIG. 7A-B, 8A-B, the base station 70 selects and switches a high/low data rate for transmitting data/packets to mobile terminal unit 80 based on evaluated response message which indicates high data rate or low data rate; col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-6, 17-8, 17-9, 17-10, 17-12, 17-14, 17-14, 17-18, 17-20; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate" as taught by Mahany, in the combined system of Berken and Shachar, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claim 39, Berken discloses a communication network supporting the exchange of voice and data (see FIG. 1A, wireless telecommunication system for voice and data communication; see page 4, line 6-9), the network comprising:

at least one portable terminal having a wireless transceiver (see FIG. 1A, wireless user device has wireless transceiver (i.e. FIG. 1C, user module 103 (with a antenna) which perform both transmitter and receiver functionalities)) adapted for communication using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital representation of sound (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed voice packets (i.e. of telephone/sound signals); see page 6, line 16-20; see page 5, line 28 to page 6, line 5);

the at least one portable terminal adapted to exchange via the wireless transceiver packets comprising digital data (see FIG. 1C, user module exchange/transfers via user module 103's antenna (i.e. radio transceiver 211) formed data packets (i.e. data signals); see page 7, line 25 to page 8, line 7;

at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) having a wireless transceiver (see FIG. 1B, node 101 has a transceiver (i.e. FIG. 1B, node 103 (with a antenna) which perform both transmitter and receiver functionalities)) for exchanging one or both of digital voice packets and digital data packets with the at least one portable terminal (see page 5, line 17-27; see page 6, line 21-26; transmission of voice packets with wireless user device of node 103; and/or see page 7, line 19-24; see page 8, line 17-22; transmission of data packets with wireless user device of node 103), the at least one access device comprising a network interface (see FIG. 1B, a fiber interface 205) for exchanging information via a wired network (see FIG. 1B, switches/exchanges data/information via PSTN, Ethernet LAN, or Token Ring LAN via fiber 161; see page 4, line 16-24; page 5, line 1-27; see page 6, line 21-26; see page 7, line 19-24; see page 8, line 17-22);

the at least one access device adapting one or both of packets comprising digital representation of sound and packets comprising digital data from its wireless transceiver for transmission via designated one of the at least one network interface (see FIG. 1A,B, a node 101

transmits the voice and/or data packet received from a radio transceiver 115 to a designated/assigned/picked network interface fiber 205 (to PSTN, Ethernet, or Token Ring networks); see page 4, line 16-24; see page 6, line 21-26; and

for adapting information from the designated one of the at least one network interface for transmission as one or both of packets comprising digital representation of sound and packets comprising digital data via its wireless transceiver (see FIG. 1A, B, a node 101 transmits the voice and/or data packet received from a designated/assigned/picked network interface 205 via a radio transceiver 115 (to user module); page 5, line 1-27; page 7, line 19-24; and

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4, packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN).

wherein the portable terminal device wirelessly received a message from the at least one access device (see FIG. 1A, 3, wireless user node (i.e. a combined system of terminal/LAN port 221/223 and control processor 215; see page 4, line 16-25; see page 9, line 1-26) receive control message from the access node (i.e. a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149)) and send to the at least one access device (see FIG. 1A, 3, and transmit the control message to the access node; see page 4, line 16-25; see page 9, line 1-26);

wherein the at least one access device transmits digital voice packets and digital data packets to the portable terminal device (see page 5, line 17-27; see page 6, line 21-26; the access node transmits voice packets and data packets to the wireless user node; see page 7, line 19-24; see page 8, line 17-22).

Berken does not explicitly disclose "destination".

However, voice packet comprising destination information for routing is so well known in the art so that it would identify and locate the recipient of the voice data packet. In particular, Shachar teaches wherein digital voice packets (see col. 8, line 32-39; voice packet) comprise destination information used for routing the digital voice packets through the communication network (see col. 12, line 1-20, 50-57; adding a service tag to the voice packet, the service tag includes the phone number to be call (i.e. destination phone information/number) for routing/transmitting/sending to the network).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "destination", as taught by Berken and well established teaching in art in the system of Berken, so that it would provide simultaneous establishing of voice communication; see Shachar col. 5, line 15-30, col. 6, line 42-55.

Although the combined system of Berken and Shachar discloses the portable terminal device wirelessly communication with the at least one access device as set froth above,

neither Berken nor Shachar explicitly discloses "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate".

However, rate control based on evaluation/measurement in the wireless communication network is well known in the art. In particular, Mahany discloses the portable terminal device (see FIG. 4, mobile terminal unit 80) evaluates a message wirelessly received (see FIG. 4, evaluates a poll or test message; also see FIG. 10, 11, 7A-7B for poll message and see FIG. 8A-8B, 9A-9B, for test message; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 69) from the at least one access device (see FIG. 4, from base station 70) and sends to the at least one access device an indication of a data rate on the evaluation (see FIG. 4, transmits to the base station 70 a response data rate message based on the evaluation; see col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-2 to 17-5; see col. 21, line 56 to col. 22, line 39) and

wherein the at least one access device selects a data rate for transmitting data/packets to the portable terminal device, based upon the indication of a data rate (see FIG. 7A-B, 8A-B, the base station 70 selects and switches a high/low data rate for transmitting data/packets to mobile terminal unit 80 based on evaluated response message which indicates high data rate or low data rate; col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-6, 17-8, 17-9, 17-10, 17-12, 17-14, 17-14, 17-18, 17-20; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluates a message wirelessly received from the at least one access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate" as taught by Mahany, in the combined system of Berken and

Shachar, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Regarding Claim 73, Berken discloses one or more circuits for use in a communication device supporting the exchange of voice and data (see FIG. 1A, C, circuits/modules/components of wireless user device for voice and data communication; see page 4, line 6-9), the one or more circuits comprising:

at least one interface to circuitry for wirelessly exchanging (see FIG. 1A, C, Radio interface 211 circuitry/module) one or both of digitized voice packets (see FIG. 1C, transmitting digital voice packets; see page 6, line 16-20) and data packets (see FIG. 1C, transmitting data packets; see page 8, line 8-16) with at least one access device (see FIG. 1A, B, a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149) of a communication network (see FIG. 1A, wireless telecommunication system; see page 4, line 10-25; see page 5, line 1-17) using a packet protocol (see FIG. 1C, see page 6, line 14-20; the user module 103 communicates by utilizing packet protocol/practice/procedure); and

at least one processor (see FIG. 1C, a combined system of processor 215, switch 213, phone 209, terminal 221, LAN 223) operably coupled to the at least one interface (see FIG. 1C, couples to radio interface 211; see page 6, line 14-20; page 7, line 25-32), the at least one processor operating to:

receive, for wireless transmission as digital voice packets, first digital voice data converted from a first electrical signal representative of sound (see FIG. 1C, phone interface 209 converts the received first electrical signal of a sound/voice input from telephone 127 into digital voice packets for radio transmission; see page 6, line 16-20), and transmit, for conversion to a

second electrical signal representative of sound, second digital voice data wirelessly receive in digital voice packets (see FIG. 1C, phone interface 209 converts back digitized voice packets received from radio interface and transmits back into second electrical signal representative of analog/sound signals for the telephone 127; see page 5, line 28 to page 6, line 5),

capture digital data into data packets for wireless transmission (see FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 forms the received data into data packets for wireless transmission), and to reproduce digital data from wirelessly received data packets (FIG. 1C, a combined system of terminal/LAN port 221/223 and control processor 215 form data signal for terminal/LAN port from received data packets via radio interface; see page 7, line 25 to page 8, line 7), and

wirelessly receiving a message from the at least one access device (see FIG. 1A, 3, wireless user node (i.e. a combined system of terminal/LAN port 221/223 and control processor 215; see page 4, line 16-25; see page 9, line 1-26) receive control message from the access node (i.e. a combined system of network node 101 and its plurality of interfaces 141,143,145,147,149))

sending to the at least one access device (see FIG. 1A, 3, transmit the control message to the access node; see page 4, line 16-25; see page 9, line 1-26);

receive digital voice packets from the at least one access device by the at least one access device (see page 5, line 17-27; see page 6, line 21-26; receiving voice packets from the access node by the wireless user node; see page 7, line 19-24; see page 8, line 17-22);

wherein digital voice packets wirelessly exchanged by the at least one portable terminal comprise information used for routing (see FIG. 3, control time slot of frame; and/or FIG. 4,

packet header of the voice time slot) the digital voice packets through the communication network (see page 9, line 1-10; see page 10, line 17-30; control time slot of the transmit/receive frame comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN; and/or a packet header of the voice time slot comprises control information for routing/transmitting/sending information through PSTN, Ethernet LAN, or Token Ring LAN).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "destination", as taught by Berken and well established teaching in art in the system of Berken, so that it would provide simultaneous establishing of voice communication; see Shachar col. 5, line 15-30, col. 6, line 42-55.

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wherein the at least one access device selects a data rate for transmitting data/packets to the portable terminal device, based upon the indication of a data rate (see FIG. 7A-B, 8A-B, the base station 70 selects and switches a high/low data rate for transmitting data/packets to mobile terminal unit 80 based on evaluated response message which indicates high data rate or low data rate; col. 5, line 44-67; see col. 8, line 60 to col. 9, line 55; see col. 10, line 35 to col. 12, line 6; also see method FIG. 17, steps 17-6, 17-8, 17-9, 17-10, 17-12, 17-14, 17-14, 17-18, 17-20; see col. 21, line 56 to col. 22, line 39).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide "evaluates a message wirelessly received from the at least one

access device, sends indication of a data rate on the evaluation and selects a data rate based upon the indication of a data rate" as taught by Mahany, in the combined system of Berken and Shachar, so that it would provide improve the data throughput rate for data communication equipment while maintaining reliable performance; see Mahany col. 2, line 5-20.

Response to Arguments

12. Applicant's arguments with respect to amended claim 22-104 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to IAN N. MOORE whose telephone number is (571)272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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